

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION

5 Entitled : A METHOD AND APPARATUS FOR DETECTING AND
LOCATING NOISE SOURCES WHETHER CORRELATED OR
NOT

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15 ABSTRACT OF THE DISCLOSURE

The invention relates to a method of detecting and
locating noise sources each emitting respective signals S_j
with $j = 1$ to M , detection being provided by means of
20 sound wave or vibration sensors each delivering a
respective time-varying electrical signal s_i with i in the
range 1 to N . According to the invention, the method
consists:

- in taking the time-varying electrical signals
25 delivered by the sensors, each signal $s_i(t)$ delivered by a
sensor being the sum of the signals S_j emitted by the
noise sources;
- in amplifying and filtering the time-varying
electrical signals as taken;
- 30 • in digitizing the electrical signals;
- in calculating a functional; and
- in minimizing the functional relative to the
vectors n_j for $j = 1$ to M so as to determine the
directions vector n_j of the noise sources.